

A Message From the Director

by Betsy Forinash

Many of our readers may not be aware, but EPA is in the midst of a crucial period in our oversight of the WIPP's safety. The start of the WIPP recertification period is still over a year away, but it is actually the current year that will set the foundation for the work that we will do after DOE submits its recertification application.

DOE has initiated a number of activities that will require EPA's attention well before we begin the formal process of recertification. During the summer and fall of 2002, we expect DOE to submit several proposals to EPA for changes to WIPP activities that are covered by our recertification. While these changes cover a variety of project areas, perhaps the most important ones concern the WIPP performance assessment, which is the cornerstone of DOE's demonstration of compliance with our public health and environmental radiation protection standards. We have been meeting often with DOE representatives to discuss their work in this area. EPA has advised DOE to submit proposed changes in 2002 to allow sufficient time for review in advance of recertification.

I would also like to highlight an action that EPA has undertaken that is separate from recertification. We have proposed to change several provisions in our WIPP Compliance Criteria (40 CFR Part 194) through a rulemaking. The proposed changes are described in this *Bulletin*. We welcome your input through written comments and public hearings, which we will hold in New Mexico in the fall.

This issue of the *WIPP Bulletin* introduces yet another new feature, *Ask*

EPA, in which we respond to questions raised by stakeholders that are of general interest. Please feel free to submit questions to our web page or toll-free information line. We will respond to requests for information, either individually or also in the *Bulletin*.

Also, this issue's *Technical Corner* addresses one of the most important compliance topics during the initial certification: DOE's analysis of the possible environmental releases of radioactive materials due to human intrusion into the WIPP (such as drilling for oil). Our hope is that the *Technical Corner* will help to explain some of the more complicated technical issues in a straightforward, understandable way.

Finally, you should have received a copy of our newest fact sheet on recertification. This fact sheet explains what's involved in recertification and when the key steps will occur. If you did not receive the fact sheet and would like one, please contact us.

On behalf of all of us at EPA who work on the WIPP, I want to thank you for your continued interest in this important project.

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What's New on the WIPP Website

We have redesigned our WIPP website and added new user-friendly features. Recent changes include:

- A separate side bar/menu for easier site navigation
- An improved link for WIPP-related news as well as other recent developments within EPA's Radiation Protection Division (RPD)
- A separate inspections page for updated information on upcoming and completed inspections
- An updated Publications page with our latest WIPP Bulletins and Fact Sheets for 2002.

EPA's New Electronic Docket (EDOCKET)

On June 1st, 2002, EPA unveiled a new electronic docketing system, EDOCKET, for use by the Agency and the general public. This new system supports the President's new E-Government Strategy for

expanding electronic government to make interactions easier.

What is a public docket?

A docket is a collection of documents (letters, reports, reference materials, etc.) that are used to support EPA's regulatory actions. EPA has three dockets for the WIPP program:

- A-92-56, which contains information about the WIPP compliance criteria,
- A-93-02, which contains information considered in making the WIPP certification decision, and
- A-98-49, which contains new information that the EPA is reviewing to determine whether the certification should be modified, suspended, or revoked.

Currently, all pertinent material is submitted to the dockets in their original, hard-copy form. This new electronic system will eliminate the use of cumbersome paper documents and allow greater participation in Agency processes, including those related to the WIPP.

Any interested parties may use EPA's EDOCKET at <http://www.epa.gov/rpas>

to access the index of all available public dockets and view current documents electronically. An advanced search option is also available, which will allow the user to search for a particular item by title, release date, document type, *Federal Register* citation, program office, or other various identifiers. The documents will be available for viewing and can be downloaded in .pdf (Adobe) format.

Parties wishing to submit comments to EPA will be able to do so electronically. Once in the system, users will be able to search for or key in the ID number for the docket they wish to review. After agreeing to a privacy and disclaimer notice, the user will then be allowed to submit their comments (along with any attachments) and enter their name, group, or organization if they wish to do so. The user will then receive a confirmation notice and their comment will be published on the internet after review by the docket staff. This allows the public to see their own comments and also comment on another user's comment(s). This process is similar to a feedback forum.

Due to certain limitations and regulations, certain types of information (databases, copyrighted documents, etc.) will not be placed in the electronic docket. For more information on what is or is not accepted or any other issue regarding EDOCKET, please refer to the *Federal Register* for May 31, 2002 (Vol. 67, No. 105; 38102-38104), or contact Shivani Desai by phone (202-566-1674) or e-mail (desai.shivani@epa.gov). EPA's WIPP dockets are not yet available on EDOCKET.

Stakeholder Meetings

Several members of EPA's WIPP staff met this spring with representatives of the following WIPP stakeholder or-

WIPP Dockets Locations

EPA Docket Center (EPA/DC)
Air and Radiation Docket
EPA West, Mail Code 6102T
1200 Pennsylvania Ave., N.W.
Washington, DC 20460
(202) 260-7548
(all dockets)

Carlsbad Public Library
101 S. Halagueno
Carlsbad, NM 88220
(505) 885-6776
(all dockets)

Zimmerman Library
Government Publications
University of New Mexico
Albuquerque, NM 87131
(505) 277-5441
(all dockets)

Fogelson Library
College of Santa Fe
1600 St. Michaels Drive
Santa Fe, NM 87505
(505) 473-6576
(Docket A-93-02 only, EPA's
WIPP Certification Decision)

New Mexico State Library
1209 Camino Carlos Rey
Santa Fe, NM 87505
(505) 476-9717
(Docket A-98-49 only,
EPA's WIPP Recertification
Decision)

ganizations in New Mexico: the Environmental Evaluation Group, Nuclear Watch of New Mexico, the Southwest Research and Information Center, Sisters of Loretto, Concerned Citizens for Nuclear Safety, and the New Mexico Attorney General. The meetings took place in Albuquerque and Santa Fe in March. In addition, we spoke separately with representatives of Citizens Against Radioactive Dumping by conference call.

At the meetings, EPA responded to questions on such topics as recertification planning, DOE's research on actinide solubility, and recent peer reviews conducted by DOE. EPA also briefed participants about the proposed changes to the WIPP Compliance Criteria (see *Focus on* article).

A general topic that was discussed was the need to make information produced by EPA and DOE easily accessible to the public. One avenue that EPA is pursuing in this regard is an electronic docket that will make materials available to anyone with access to the Internet. Several stakeholders requested that files posted electronically be readily downloadable, and that requests for comment be staggered to facilitate public review. We will take this request into account when we post documents online.

EPA Completes Review of DOE's Annual WIPP Change Report

EPA requires that DOE submit an annual WIPP Change Report that documents any changes that were made to the WIPP program during the previous year. In September 1998 we provided DOE with reporting guidance. We review the changing information and determine whether the initial certification should be modified, suspended, or revoked. Sometimes DOE may want to

make changes to their activities to make improvements or increase efficiency. In most cases, these changes are insignificant. If EPA thinks the changes are significant, we may ask for public comments to assist in our review. Details of changes to the WIPP that EPA has reviewed since 1998 may be found in our recertification docket.

DOE submitted its fourth (FY 2001) annual WIPP Change Report on November 13, 2001. EPA evaluated it along with requested supplemental information. On June 13, 2002, we determined that the reported changes were not significant and do not require a modification, suspension, or revocation of our Certification Decision of May 13, 1998. We expect to receive the 2002 change report in November.

Waste Characterization Inspections

In December 2001 EPA inspected the Hanford Site Plutonium Finishing Plant to verify its continued compliance with our regulations. During this inspection we also examined the use of new waste characterization systems at the site. Based on our inspection, we approved the site to continue characterizing transuranic waste using both the new methods we inspected and previously approved systems.

In April, 2002, EPA inspected the Idaho National Engineering and Environmental Laboratory (INEEL) to examine new waste characterization systems and a new waste stream (organic sludge). Based on our inspection, we determined the site was in compliance with our regulations for characterizing the waste streams and equipment examined.

The reports for these inspections may be found in our docket (A-98-49, Items II-A4-20 and 21).

Waste Shipments

The number of shipments from transuranic waste sites to the WIPP as of June 30 is listed below. Each shipment could contain as many as 42 drums of radioactive waste.

Savannah River	8
Rocky Flats	588
Los Alamos	25
Idaho	338
Hanford	10

Focus On: Making Experience Count

Proposed Changes to EPA's Compliance Criteria for the Recertification of the WIPP

It has been four years since we certified the WIPP as a disposal facility for defense transuranic (TRU) wastes. In that period, we have conducted dozens of regulatory inspections. Now we seek to apply that experience to the WIPP Compliance Criteria to keep them comprehensive and appropriate, while also improving process and resource efficiencies.

What are the proposed changes?

Proposed revisions to the compliance criteria include: (1) addition of a process for making minor changes to the provisions of the Compliance Criteria; (2) changes to the approval process for waste characterization programs at Department of Energy transuranic waste sites; (3) changes to allow for the submission of copies of compliance applications and reference materials in a non-paper format (e.g., compact disk); and (4) replacement of the term "process knowledge" with "acceptable knowledge." The second item is the most significant change and the focus of this article.

What is our Role?

On May 13, 1998, EPA announced its final compliance certification decision. Since March 1999, the WIPP has received hundreds of waste shipments for disposal. EPA has regulatory authority over the WIPP for the operational lifetime of the facility, approximately 35 years. As part of our regulatory role at the WIPP, we review, analyze, inspect, and approve WIPP-related activities throughout the DOE complex to ensure that DOE

operates the WIPP facility in compliance with our regulations.

How are we making our experience count?

One of the most critical aspects of our ongoing regulatory oversight involves the inspection of waste generator sites that wish to send their waste to the WIPP for disposal. WIPP certification is based on specific assumptions made about the composition of the waste destined for disposal. It is crucial that waste composition be measured and tracked, so that established limits for waste components important to the safe performance of the WIPP facility are not exceeded. At the time of the final certification, DOE submitted a comprehensive waste characterization plan for their facilities, but was able to demonstrate their waste characterization capability at only one site for a single "waste stream."

A "waste stream" is defined by DOE as waste material generated from a single process or activity that is similar in material, physical form, isotopic make-up, and hazardous constituents. Given the limited demonstration of DOE's waste characterization capability, EPA issued a condition in its final certification that precludes DOE from shipping waste to the WIPP until EPA has approved the processes for characterizing wastes destined for disposal.

Section 194.8(b) establishes the process we use to approve waste shipments from the waste generator sites to the WIPP facility. Under the section 194.8(b) approval process, we must inspect and approve each DOE TRU generator waste site that wishes

to ship waste, by conducting an inspection for each waste stream or group of waste streams proposed for disposal at WIPP. We also must publish a *Federal Register* notice to announce the inspection, open a 30-day comment period, and solicit public comment on relevant DOE documents. If a site receives our approval to ship a single waste stream or group of waste streams, that site may not ship a different waste stream until we perform an additional inspection under section 194.8(b).

After four years of regulatory experience, we have determined that the process used to approve waste shipments to the WIPP may be improved. To date, we have performed over 20 inspections under 194.8(b). Five major DOE sites have been approved to ship a variety of waste streams to the WIPP. EPA inspectors have been able to witness and verify DOE's ability to characterize numerous waste streams. Our experience in verifying DOE's compliance shows that it is not always ideal to have waste generator sites demonstrate their characterization capabilities on individual waste streams. The focus of our inspection program will be on the overall waste characterization program at the site. For example, we will evaluate how DOE staff use their knowledge of waste characterization processes and waste types to select and use the right waste characterization process for the particular characteristics of the waste destined for disposal.

We have also observed that the public notice process in 194.8 has proven to be confusing to the public, stakeholders, and DOE. The proposed rule will

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What is EPA's process for recertifying WIPP?

DOE is required by law to submit documentation that the WIPP remains in compliance with EPA's certification. DOE must submit the first recertification application in March 2004, five years after the first receipt of waste at WIPP in March 1999. As with the original WIPP application, EPA will examine the information submitted by DOE to determine if it is complete. EPA may request additional information from DOE. Once EPA has complete information, EPA has six months to determine whether or not to recertify WIPP. During these six months EPA will conduct a thorough evaluation of the application, paying particular attention to information or conditions that may have changed since the original 1998 certification. EPA will also request at least 30 days of public comment on DOE's recertification application to help form our decisions. Once EPA's evaluation is complete, EPA will issue a determination on recertification in the *Federal Register* and will provide supporting documentation for our decision.

As the time for recertification approaches, we will provide more updates and details on our activities and plans.

Focus on: Making Experience Count

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clarify this process. Only one approval per site will be issued under 194.8. Under the new process, EPA will conduct inspections at each site and request public comment on EPA's inspection report and proposed approval for a site. (Currently, we request comment on site waste characterization plans that are made available to the public before inspection.) Reporting requirements will be assigned to each site to address changes that may occur in the waste characterization program after site approval. Information received through the reporting requirements will be used to determine when additional inspections are necessary. These inspections will be carried out to confirm continued compliance and verify the adequacy of changes in the approved waste characterization programs.

We believe the proposed process will offer the same level of oversight for waste characterization activities, make site approvals more transparent, and increase EPA's control over resources while maintaining confidence in DOE's compliance.

Ask EPA highlights questions received from citizens on our WIPP Information Line, our WIPP Web Site, at our stakeholder meetings, and from our newsletter readers.

What is RH Waste?

RH (remote-handled) waste is a type of radioactive waste with a surface radiation dose rate of greater than 200 mrem per hour. RH waste emits higher levels of penetrating gamma radiation and, therefore, must be handled by remotely-operated machines. Like contact-handled transuranic waste (currently disposed of at the WIPP repository) RH waste may be disposed of at the WIPP if the EPA approves such disposal. Only a small portion of the volume of wastes potentially destined for disposal at the WIPP is remote-handled waste. To obtain an EPA approval, DOE sites generating or storing RH waste (for example, Hanford and Oak Ridge) must show that the radioactivity of RH waste that would be disposed of at the WIPP facility will not exceed the limit imposed by law. EPA is expecting a proposal from DOE for handling RH waste during the summer.

What areas of expertise are represented on EPA's WIPP Team and how can I contact them if I have questions on EPA's WIPP Program?

EPA's WIPP Team consists of experts in the fields of chemistry, environmental science, geology, engineering, hydrology and communications. The WIPP staff are located in Washington, DC; and Dallas, Texas. Members of the team conduct regular audits and inspections of WIPP-related activities at the WIPP site and at other DOE facilities. If you have questions about our WIPP regulatory program, you can leave a message or question on our WIPP Information Line at 1-800-331-WIPP. You can call our office directly at (202) 564-9310. You may also contact us on the internet through our webmaster at: webmaster.oria@epa.gov. A member of the WIPP Team will respond to you directly and promptly.

A Look at Human Intrusion into the WIPP

In our last *Bulletin* we discussed the Features, Events and Processes (FEPs) that were compiled and examined for evaluating the long-term performance of the WIPP repository. In that article, you may recall, we stated that the human intrusion scenarios are the most important to the containment of waste. In this Technical Corner, we will discuss the human intrusion scenarios specifically.

Analyses have shown that the only way radioactive waste could be released from the WIPP repository is if someone intrudes into the repository or if intrusions elsewhere in the vicinity of WIPP have impacts on the repository. DOE has developed a list of ways that various intrusions could impact the repository. These are called human intrusion scenarios. Most of the scenarios involve

some type of drilling or drilling practices.

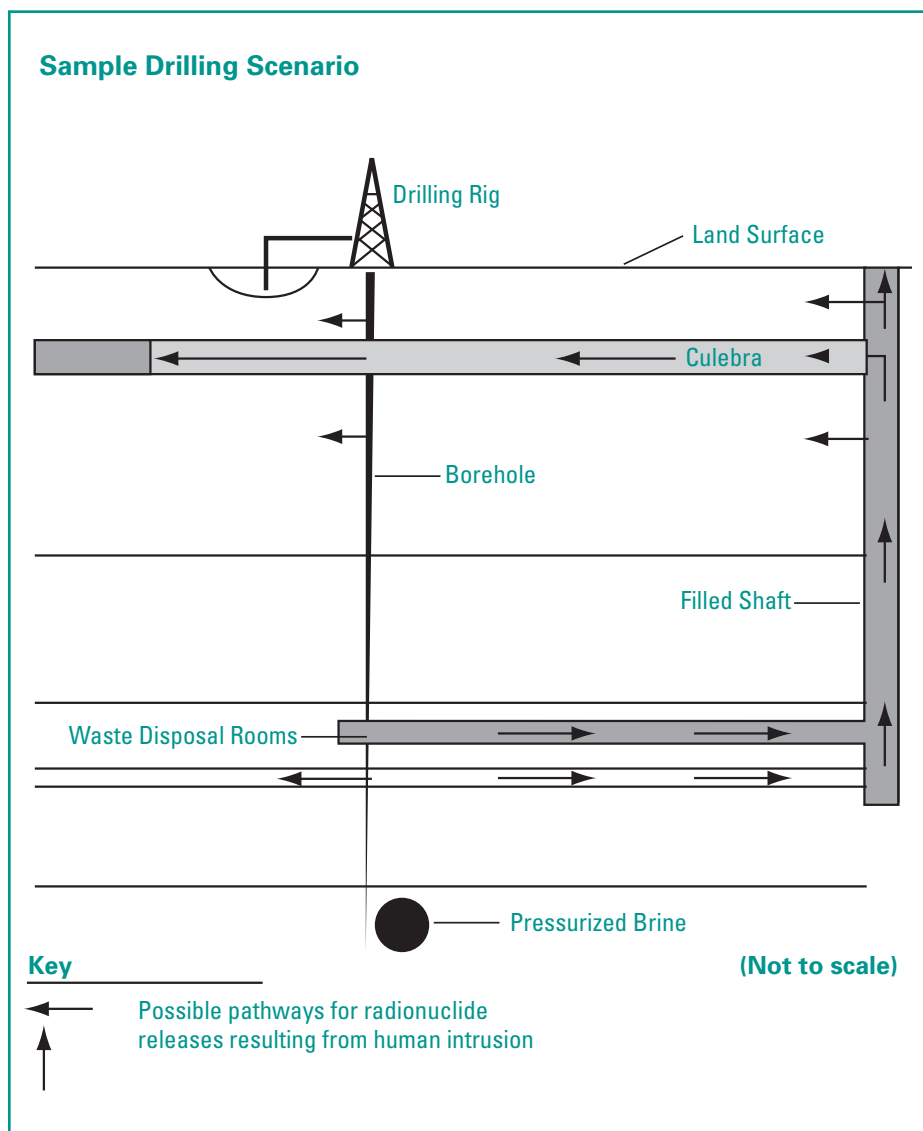
The intrusion scenario that will have the most impact on radioactive waste releases is one that involves a borehole that is drilled directly through a stack of waste drums. This event is the most significant because there are three ways that radioactive waste could leave the repository: cuttings, cavings and spallings.

- 1) **Cuttings** are the actual waste cut out by the action of the drill bit.
- 2) **Cavings** are the waste that is removed or washed from the sides of the borehole by the action of drilling fluid flowing in the borehole.
- 3) **Spallings** are the waste that can be forced into the borehole of the surrounding waste room by the action of pressurized gas in the waste room.

These mechanisms combine to produce the greatest releases when modeling the WIPP.

A great deal of work has been done to attempt to understand cuttings, cavings, and in particular, spallings. Spallings is driven by gas pressure, therefore a clear understanding of the mechanisms that create gas in the waste rooms is very important. Gas pressure in the waste rooms is created by the degradation of materials in the waste. For example, if there is sufficient water in the repository, the steel 55 gallon drums used to transport waste to WIPP and other metals will rust and produce gas. If the pressure generated in a waste room is high enough when a drilling intrusion happens, a spallings release could occur.

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Technical Corner

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EPA and DOE also considered the impact of mining for natural resource, such as potash mining, near WIPP. This human intrusion scenario may not directly impact the waste rooms, but it may affect the transport of waste from WIPP. For example, potash mining hundreds of feet above the WIPP may indirectly change the characteristics of shallower rock formations, such as the Culebra, and may cause brine to flow more readily through those formations.

EPA's analyses of the human intrusion scenarios showed that even with human intrusion into the WIPP repository, EPA's containment requirements will be met and the site will remain safe.

The human intrusion scenarios can be very complex. They cover many important topics that integrate all that we currently know about the WIPP site. In our next issue of the **WIPP Bulletin**, we will consider one of the human intrusion scenarios that was important during EPA's Certification Decision: Fluid Injection.

EPA's WIPP Activities 2002

Summer

- Proposed Technical Meeting with DOE (Location: TBD)
- DOE's Proposal for Remote Handled Waste (RH) at WIPP
- Proposal on Revisions to EPA's Compliance Criteria for the WIPP

Fall

- Proposed Technical Meeting with DOE (Location: TBD)
- Public Hearings in New Mexico on EPA's Proposed Revisions to WIPP Compliance Criteria
- Meetings with Stakeholder Groups in New Mexico
- Performance Assessment Related Proposal from DOE
- Publish Final Decision on Revisions to EPA's Compliance Criteria for the WIPP

Dates for EPA's WIPP Activities are based on projected timeframes for receiving information from DOE

For More Information About the WIPP

More information on EPA's continued activities concerning the WIPP can be obtained from any of EPA's five public dockets (Washington DC, and Albuquerque, Carlsbad, and Santa Fe, New Mexico). The Docket number for EPA's recertification activities at the WIPP is A-98-49. The pre-certification and certification decision Docket is A-93-02. For the latest information on EPA activities regarding the WIPP, please call EPA's recorded WIPP Information Line at 1-800-331-WIPP.

You can also read all about EPA's WIPP Program on the Internet. EPA's WIPP Homepage is an excellent source for current information on EPA's WIPP activities. From the Homepage you can also download EPA documents and docket information. EPA's WIPP Homepage address is:

www.epa.gov/radiation/wipp/

Contacts and On-Line Resources WIPP Transportation Information*

WIPP Facility TRU Waste Transportation	Dennis Hurtt	(505) 234-7327	www.wipp.carlsbad.nm.us
	U.S. Department of Energy Office of Public Affairs National Transportation Program		www.ntp.doe.gov
Transportation Issues	Anne Clarke	(505) 476-3224	www.emnrd.state.nm.us/wipp
	Coordinator of New Mexico's Radioactive Waste Task Force, State of New Mexico		
	Richard Swedberg	(303) 969-6744, ext. 0363	www.fhwa.dot.gov/omc/omchome.html
	Health Physicist U.S. Department of Transportation		
	Ron Ross	(303) 623-9378	www.westgov.org/wipp
	Program Manager Western Governors' Association		
	Debbie Cohen	(202) 293-2270, ext. 478	www.nsc.org/ehc/wipp.htm
	National Safety Council		

*EPA does not regulate waste transportation to WIPP, however, we receive many requests for this information.



United States Environmental
Protection Agency (6608J)
Washington, DC 20460

Official Business

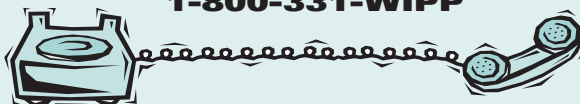
Penalty for Private Use \$300

Forwarding Service Requested

First Class Mail
Postage and Fees Paid
EPA
G-35

For Further Information on EPA's WIPP Activities
Please Call the WIPP Information Line

1-800-331-WIPP



or visit our website at:

<http://www.epa.gov/radiation/wipp>